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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,953	03/30/2001	Kenneth William Willman	7973MR	3897

27752 7590 02/10/2005

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EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,953

Applicant(s)

WILLMAN ET AL.

Examiner

Jeremy R. Pierce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-42, 65-71, 74-83 and 85-111 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-42, 65-71, 74-83 and 85-111 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/22/04
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on November 22, 2004 has been entered. Claims 38 and 90 have been amended. New claims 95-111 have been added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 38-42, 65-71, 74-83, and 85-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lerner et al. (U.S. Patent No. 5,198,292) in view of Ngai (U.S. Patent No. 6,314,627).

Applicant amends claim 38 to recite the substrate consists essentially of a single layer of nonwoven material. However, claim 38 uses "comprising" language when referring to the cleaning sheet, so other layers may be present. Additionally, the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps and those that do not materially affect the basic and novel characteristics of the claimed invention. See MPEP § 2111.03 [R-2]. So the substrate may still contain other layers, so long as the basic and novel characteristics of the claimed invention are not affected.

Applicant amends claim 90 to recite the substrate comprises a non-apertured layer of nonwoven material. The substrate of Ngai still meets this claim limitation because Ngai teaches the "structured surface" may be in the form of a three dimensional surface or a pattern of apertures (column 2, lines 30-32). Ngai does not require apertures, and also teaches that they are not desirable when an impervious fabric is desired (column 1, lines 36-40).

Lerner et al. disclose a cleaning cloth comprising pressure sensitive adhesive and tackifier (Abstract). Lerner et al. disclose using a hydroentangled web as the substrate (column 5, lines 55-66), but do not disclose hydroentangling to provide a macroscopically three-dimensional substrate. Ngai also teaches a hydroentangled nonwoven fabric that is efficient for wiping solid matter (Abstract). Ngai discloses that a three dimensional quality is provided to the fabric in the form of ridges, bumps, or other geometric configurations that are discernable to the human eye in order to provide a fabric that is far more efficient at collecting solid than a flat fabric (column 2, lines 30-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to provide a three dimensional texture to the fabric of Lerner et al. in order to improve the ability of the tack cloth of Lerner et al. to retain solid particles, as taught by Ngai. With regard to the amount of polymeric additive incorporated into the substrate, Ngai teaches that the three layer substrate will weigh between 30 and 120 grams per square meter (see column 4, line 55; column 5, lines 31-32; and column 8, lines 31-34). Lerner et al. disclose the amount of polymer material, based on the dry fabric weight, may vary between 3 and 50% depending on the desired end use (column

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8, lines 19-23). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use between 0.1 and 10 gsm of polymeric additive, since the percentages provided by Lerner et al. would embrace that range. Also, the amount of polymeric additive used would be a result effective variable depending on the weight of the fabric, and whether a low-activity tack cloth or high-activity tack cloth were desired for the end product (see Lerner et al., column 8, lines 19-23). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). With regard to claims 39, 40, 91, and 92, similar reasoning applies to the smaller ranges of polymer additive recited in these claims. With regard to the Average Height Differential of least 0.5 mm for the peaks and valleys and claims 65 and 66, Ngai discloses transferring a pattern from a forming support, and specifically recites U.S. Patent No. 5,098,764 to Drelich et al. for an example of usable forming supports (column 2, lines 41-48). Drelich et al. disclose the forming support to have a height differential from peak to valley of 0.229 cm (column 11, line 8). Since the material is molded to the same shape as the forming support, the average height differential of the Ngai substrate would be at least 1.5 mm.

With regard to claims 42 and 94, Lerner et al. disclose using polyisobutylene (column 6, line 54). With regard to claims 69 and 70, Drelich et al. disclose the peaks are spaced on 0.21 cm centers (column 11, line 12). With regard to claims 67 and 68, the surface topography index calculated using the above height differential and peak-to-peak values falls within the claimed ranges. With regard to claim 71, Ngai discloses the

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4. Claims 95-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lerner et al. in view of Ngai as set forth above, and further in view of Bhattacharjee et al. (U.S. Patent No. 5,227,844).

Lerner et al. do not teach a zone on the fabric that is free of the coating composition. Bhattacharjee et al. teach that sufficient cleaning is attained when a pattern of tacky adhesive is applied to a cleaning substrate rather than a continuous coating (column 4, lines 26-46). It would have been obvious to a person having ordinary skill in the art at the time of the invention to create the cleaning cloth with at least one zone not possessing the coating in order to save on the amount of coating used while still creating a substrate with sufficient cleaning ability, as taught by Bhattacharjee et al. With regard to claim 110, other layers of fabric are not precluded by the recitation that the cleaning sheet is made of a single layer.

Response to Arguments

5. Applicant's arguments filed November 22, 2004 have been fully considered but they are not persuasive.

6. Applicant argues that neither Lerner et al. nor Ngai teach a cleaning sheet comprising a substrate consisting essentially of a single layer of nonwoven material. However, Applicant's claims use "comprising" language, so other layers are not precluded. Additionally, "consisting essentially of" only precludes materials that materially affect the basic and novel characteristics of the claimed invention. Additional

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substrate is nonwoven (column 2, line 15). With regard to claims 74, 75 and 84-86, Drelich et al. disclose the forming support to have a height differential from peak to valley of 0.229 cm (column 11, line 8). With regard to claim 76, although Ngai does not disclose the shape of the raised regions, it would have been obvious to a person having ordinary skill in the art at the time of the invention to form the raised regions in the shape of a rounded parallelogram since selection of the shape is part of the process of selecting the design pattern of the nonwoven fabric. Optimizing a desired pattern, absent any unexpected results, is an obvious modification to one having ordinary skill in the art. With regard to claim 77, the recessed regions would form a continuous pattern using the forming supports disclosed in Drelich et al. With regard to claims 78 and 79, although neither Ngai nor Drelich et al. disclose channel width, it is reasonable to presume that the claimed width is inherent because the dimensional properties of the three-dimensional pattern of raised regions are similar. Alternatively, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have the recessed pattern include a channel width between 1 and 8 mm in order to create sufficient space between raised regions so that the three-dimensional structure is properly allowed to trap solid particles, as taught by Ngai (column 2, lines 60-67). With regard to claim 80, Lerner et al. teach the entire fabric uniformly contains the polymeric additive (column 3, lines 6-9). With regard to claim 88, Lerner et al. disclose that the amount of tack allows for folding (column 6, line 45). With regard to claim 89, Ngai teaches the three-dimensional structure traps solid material (column 2, lines 60-67).

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fabric layers would not materially affect the basic and novel characteristics of the claimed invention.

7. Applicant argues that neither Lerner et al. nor Ngai teaches a cleaning sheet comprising a substrate comprising a non-apertured layer of nonwoven material. The Examiner agrees that Ngai discloses embodiments where apertures may be present in the fabric. However, Ngai does not require apertures. They are an alternative embodiment to the fabric having a three dimensional surface (column 2, lines 30-32). At column 2, lines 54-55, Ngai states, "The recessed void areas may comprise apertures." Ngai does not state that the void areas must comprise apertures.

8. Applicant argues that neither Lerner et al. nor Ngai teach first and second zones of polymeric additive. This new limitation is addressed with a new rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JKP

JRP

February 7, 2005

Elizabeth M. Cole
ELIZABETH M. COLE
PRIMARY EXAMINER